

BABKO, A.K.; SHTOKALO, M.I.

Use of the metal-indicator method for the study of oxalate complexes of iron. Ukr.khim.zhur. 30 no.11:1204-1213 '64. (MIRA 18:2)

1. Institut obshchey i neorganicheskoy khimii AN UkrSSR.

SHTOKALOV, D.A., Cand Tech Sci -- (diss) "Improved  
~~irrigating~~  
~~spraying~~ along trenches." Novocherkassk, 1957,  
16 pp (Min of Agr RSFSR. Novocherkassk Engineering  
Improvement Inst NIMI) 200 copies (KL, 32-58, 109)

- 43 -

SHTOKALOV, D.A.; STOL'NIKOVA, G.A., red.

[Irrigation technique for grain crops] Tekhnika poliva  
zernovykh kul'tur. Moskva, Kolos, 1964. 61 p.  
(MIRA 17:12)

SHTOKALOV, I.

Solution of linear differential equations of the  $n$ -th order with  
variable coefficients. Zbir.prats' Inst.mat.AN URSS no.9:140-161  
'48. (Differential equations, Linear)  
(MLRA 9:9)

L 34351-66 EWT(1) WH

ACC NR: AP6009062

SOURCE CODE: UR/0207/66/000/001/0142/0144

AUTHOR: Shtokolov, L. S. (Novosibirsk)

ORG: None

TITLE: A generalization of experimental data on the prevalent crisis of heat exchange during the boiling of liquids

SOURCE: Zhurnal prikladnoy mekhaniki i tekhnicheskoy fiziki, no. 1, 1966, 142-144

TOPIC TAGS: heat transfer, fluid flow, heat transfer fluid, hydrodynamics

ABSTRACT: The author presents a generalized formula for the calculation of critical heat flows during extended crises. It is shown that prevalent crises are mostly characteristic for the boiling of high-temperature organic heat-transfer agents. An analysis of experimental data shows that the values of the critical density of heat flux during extended crises is mainly determined by pressure and fluid flow rate, and is independent of either time or experimental sequence. Good agreement of the experimental points at highly variable conditions of fluid flow near the surface of heating confirms the assumption

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ACC NR: AP6009062

of the author on the hydrodynamic nature of the extended crisis. Senior laboratory technician I. V. Svorkova took part in the work. The author thanks S. S. Kutateladze and A. I. Leont'yev for participating in the discussion of this work and for their remarks. Orig. art. has: 4 figures and 4 formulas.

SUB CODE: 20 / SUBM DATE: 09Mar65 / ORIG REF: 007 / OTH REF: 001

Card 2/2 *ULR*

1. 40881-66 REF(1)/REF(1) (A) SOURCE CODE: UR/0000/65/000/000/0110/0110  
 ACC NR: AT6021839  
 AUTHOR: Kutaleladze, S. S.; Leont'yev, A. I.; Mamontova, N. N.;  
 Moskvicheva, V. N.; Shtokolov, L. S.  
 ORG: Institute of Thermophysics, Siberian Branch AN SSSR (Institut  
 teplofiziki SO AN SSSR)  
 TITLE: Hydrodynamic theory of the heat transfer crisis in forced flow  
 of a boiling liquid. The crisis at high flow rates and a zero vapor  
 content in the flow  
 SOURCE: Teplo- i massoperenos. t. III: Teplo- i massoperenos pri  
 fazovykh prevrashcheniyakh (Heat and mass transfer. v. 3: Heat and mass  
 transfer in phase transformations). Minsk, Nauka i tekhnika, 1965,  
 118-124  
 TOPIC TAGS: boiling, heat transfer, hydrodynamic theory  
 ABSTRACT: From the theory of the limiting friction laws in the  
 turbulent boundary layer it follows that when the Reynolds number  
 approaches infinity, the critical injection in a homogeneous flow is  
 equal to  

$$I_{sp} = 2c_{fo} \gamma W_0.$$
 (1)

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137-58-4-6437

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 4, p 14 (USSR)

AUTHOR: Shtokarev, A. D.

TITLE: Operation of An Experimental FluoSolids Roasting Installation at the Sredneural'skiy Copper Smelter (O rabote opytной ustanovki dlya obzhiga v kipyashchem sloye na Sredneural'skom medeplavil'nom zavode)

PERIODICAL: Tr. Tekhn. soveshchaniya po obzhigu materialov v kipyashchem sloye. Moscow, Metallurgizdat, 1956, pp 72-74

ABSTRACT: The schedule under which this installation operated was as follows: drying of concentrate (9-11 percent Cu, 6-7 percent Zn, 37-40 percent S, 34-35 percent Fe) in a drum drier, delivery to the bin, transfer from it by a belt platter feed onto which quartz and limestone were also proportioned. This charge went to the disintegrator, from which it went to the screen, and the -2 mm product was carried by belt past scales and on to FluoSolids roasting. The first time the furnace was used--electric filter dust being employed--the entire layer fused. After the second use--a charge being fed (800 kg sand, 200 kg cinders, and 200 kg concentrate)--the furnace stopped after 12 hours because of ac-

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137-58-4-6437

Operation of An Experimental FluoSolids Roasting Installation (cont.)

cumulation of large grains of concentrate in the layer. The furnace was then started on a charge (18-20 percent concentrate, fine sand) and was run for 10 days. 220 tons of concentrate was treated, and 86 tons of cinder was obtained, the rest being electric filter dust. The S content of the cinders was 3.7-6.0 percent and the sulfate content up to 2.5 percent. The  $\text{SO}_2$  content of the gases was 10.4 and up to 12 percent. The capacity of the furnace was appx. 10 t/m<sup>2</sup> of charge per day, the air used being 419-425 m<sup>3</sup>/m<sup>2</sup>/hr. The blast pressure was 1200-1350 mm water.

1. Metallurgy--Roasting precesses

A. P.

Card 2/2

ALEKSEYEV, Ye.S.; ZASYPKIN, N.S.; SHTOKAREV, A.D.; BUROVOY, I.A.; KRICHEVSKIY,  
G.Ya.; BOROVKOV, Ye.G.; KUZNETSOV, Yu.A.

Utilization of the excess heat of the fluidized bed of roasting furnaces.  
Prom. energ. 20 no.5:43-47 My '65. (MIRA 18:7)

SECRET, 11/1/77

AUTHORS: Burovoy, I.A., Krichevskiy, G.Ya. and Shtckarev, A.M. 136-58-3--/21

TITLE: Development of arrangements for removing excess heat from a fluidized bed for roasting granulated copper-zinc concentrate at a high productivity (Razrabotka ustroystv ot'yema izbytochnogo tepla kipyashchego sloya dlya obzhiga granulirovannogo medno-tsinkovogo kontsentrata pri vysokoy proizvoditel'nosti)

PERIODICAL: Tsvetnyye Metally, 1958, <sup>3</sup>/<sub>4</sub> Nr.3. pp. 30 - 38 (USSR)

ABSTRACT: A limiting factor in the productivity of fluidized-bed roasting of sulphide ores in roasters of 1.5m<sup>2</sup> hearth area and over, though this is not evident in laboratory-scale installations because of higher wall-area: hearth area ratios. The authors describe work at Gintsvetmet and the Sredneural'skiy copper-smelting works on a 1.5-m<sup>2</sup> hearth area roaster with water-cooled sides and divided into three zones by two water-cooled blocks, each consisting of three plates with evaporative cooling (figs.1 & 2). Degtyar copper-zinc concentrate pelletised in a drying drum was used, the roasting being continued to 5-8% S in the residue and to enable the daily rate of roasting to be raised to 13 tonnes of sulphur/m<sup>2</sup> two of the zones of the roaster were provided with additional cooling in the form of vertical cooling coils directly in the bed. The rate of heat removal was 530,000 kcal/m<sup>3</sup> of bed, the vertical-tube coolers being the most effective, while a simultaneously installed water-injection system had comparatively little effect (table 3).

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Development of arrangements for removing excess heat from a fluidized bed for roasting granulated copper-zinc concentrate at a high productivity. 136-58-3-6/21

The authors give details of the procedure used for casting the blocks (fig.3), describe the difficulties encountered in starting up a roaster with such effective cooling, and outline the tedious procedure which, in the absence of blast-heating facilities, had to be adopted. They give in a diagrammatic form (fig.4) comparative data on productivity and specific firing rates for fluidized-bed roasting of various sulphide materials at the Voskresenskiy chemical combine as well as at the Sredneural'skiy and zinc works. The following personnel of the Sredneural'skiy works are named as having participated in the works: Ye.S. Alekseyev, T.F. Kirova, P.V. Bryantsev, L.I. Burma, E.G. Klyayn, M.P. Bryantseva, V.K. Vinokurov, V.P. Grishanov, A.V. Postogonov, and A.P. Ol'kov. The Gintsvetmet personnel were I.T. Matveyev and M.I. Mantsevich. There are 4 figures, 3 tables and 3 Slavic references.

ASSOCIATION: Gintsvetmet i Sredneural'skiy Medeplavil'nyy Zavod (Gintsvetmet and the Sredneural'skiy Copper Smelting Works)  
AVAILABLE: Library of Congress.

1. Sulphide ores-Processing-Equipment
2. Heat transfer-Equipment

Card 2/2

SHTOKMAN, G.P.

Distr: 424J

Corrosive activity of nitrate-nitrite melts. R. I. Gurovich and G. P. Shtokman. *Tr. Priklad. Khim.* 30, 1541-52 (1957); U. S. A. 51, 1806. --The corrosive activity of a nitrate-nitrite melt (1) contg.  $\text{KNO}_3$  63,  $\text{NaNO}_2$  7, and  $\text{NaNO}_3$  40% on steel alloys and Armco steel was studied. Steel 12Cr2PV contg. Cr 2 and V 0.81% failed at 600° whereas steel Cr5V (73) and (77) contg. Cr 5.44-6.48, V 0.85-0.88, and W 0.37-0.57% corroded very little, 0.2 g./sq. m. hr., at 600-650°. The latter 2 failed at 600° and the melt contained 0.33% Cr. Alloys OCrN-M contg. Ni 2.84 and Cr 1.04% and some Mo, and Cr18Ni9Ti contg. Cr 18, Ni 9, and Ti 0.5% were stable at 600° and the melt contained 0.018%  $\text{Cr}_2\text{O}_3$  and no Fe or Ni. Armco steel failed at 600°. The addn. of 2%  $\text{K}_2\text{Cr}_2\text{O}_7$  to I increased the corrosiveness of the melt toward alloys OCrN-M and towards alloys 12MPCr and 12CrMP contg. Cr 0.0-0.92, V 0.20-0.24, and Mo 0.35-0.38%. I. Benoit.

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1

1/1

Shitokman, I. G.

Shitokman, I. G. - "The theoretical determination of the ultimate length of belt conveyors of a given design and the selection of the location of the driving gear," Investiya Dne rospetr. gornogo in-ta, Vol. XIX, 1948, p. 173-86

SO: U-3600, 10 July 53, (Letopis 'Zhurnal 'nykh Statey, No. 6, 1949).

SILVERMAN(sic), I. I.

Silverman (sic), I. I.: "Determining the acceleration of movement of a chain of type-St-11 scraper conveyors", Izvestiya Dnepropetr. gornogo in-ta im. Artema, Vol. XX, 1948, p. 105-11.

SO: U-4631, 16 Sept. 53, (Letopis 'Zhurnal 'nykh State', No. 24, 1949).

SHUKLA, I. G.

Polyakov, A. S. and <sup>Sh</sup>Shukla, I. G. "The achievements of Soviet science in the theory of belt conveyors", Izvestiya Dnepropetr. gornogo in-ta im. Artama, Vol. XX, 1961, p. 135-43, - Bibliog: 17 items.

SO: 1-4631, 16 Sept. 1953, (Letopis 'Zhurnal



1963. SPRING DYNAMOMETER FOR MEASURING FORCES IN CHAIN OF SCRAPER CONVEYOR. Shtekman, I.G. and Grebennilov, S.A. (Ugol(Coal). Dec. 1961, 21,22). An illustrated description is given. A special link which is inserted in the chain has slightly S-shaped springy side plates and an instrument travelling round with it and recording relative movements of its two pins. (L).

SHTOKHMAN, I.G., kandidat tekhnicheskikh nauk.

Dynamic stresses in the chain of scraping conveyers. Sbor. trud. Inst.  
gor.dela AN URSR no.2:97-104 '52. (MLBA 7:12)  
(Coal mining machinery)

SOLOV'YEV, A.A., kandidat tekhnicheskikh nauk.

Review of "Collection of problems for a course on mine transportation" by Professor N.S.Poliakov, Docent E.K.Komarova, Docent I.G.Shtokman. A.A.Solov'ev. Ugol' 28 no.6:46-47 Je '53. (MLRA 6:6)

1. Khar'kovskiy gornyy institut. (Mine haulage) (Poliakov, N.S.)  
(Komarova, E.K.) (Shtokman, I.G.)

SHTOKMAN, I.G., dotsent, kandidat tekhnicheskikh nauk; MURZIN, V.A.,  
kandidat tekhnicheskikh nauk; POLUYANSKIY, S.A., inzhener.

Experimental determination of the propagation speed of resiliency  
waves in conveyor chains. Vest.mash. 34 no.2:26-27 F '54.

(MIRA 7:3)

1. Dnepropetrovskiy gornyy institut im. Artema (for Shtokman).
2. Institut gornogo dela Akademii nauk URSS (for Murzin and  
Poluyanskiy). (Conveying machinery)

SHTOKMAN, I. G.

VESTNIK MASHINOSTROYENIYA, (ENGINEERING JOURNAL)

Vol 35, No. 7, July, 1955

On the existence of dynamic loads in the chains of conveyor installations. Report on the visualization and causes of impact and fluctuating loads, using strain gauges and oscillographic recording contains critical comments on the views expressed in a paper by V. A. Krushkov on the same subject (same journal, 1953, No. 10).

By I. G. Shtokman, V. A. Murzin and S. A. Poluyanskyl ... 16

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Name: SHTOKMAN, Il'ya Grigor'yevich

Dissertation: Dynamic loads of chain drives of ore conveyers

Degree: Doc Tech Sci

Affiliation: Dnepropetrovsk Order of Labor Red Banner Mining Inst imeni Artem

Defense Date, Place: 13 Jun 56, Council of Leningrad Order of Lenin and Order of Labor Red Banner Mining Inst imeni Plekhanov

Certification Date: 29 Jun 57

Source: BMD 18/57

POLYAKOV, Nikolay Sergeyevich; LICHIN, Anisim Yakovlevich; ~~SHTOKMAN~~ Il'ya  
Grigor'yevich; FAYBISOVICH, I.L., otvetstvennyy redaktor; NADEINSKAYA,  
A.A., tekhnicheskiiy redaktor

[Cutter-loader model DGI-2m] Gornoprokhodcheskii kombain DGI-2m.  
Moskva, Ugletekhizdat, 1956. 11 p. (MIRA 9:10)  
(Coal mining machinery)

124-58-9-10548

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 9, p 158 (USSR)

AUTHOR: Shtokman, I. G.

TITLE: Dynamic Loads in the Chain-hauling Organs of Mining Conveyers  
(Dinamicheskiye nagruzki v tsepnykh tyagovykh organakh rudnichnykh konveyerov)

PERIODICAL: V sb.: Vopr. teorii i rascheta pod'yemno-transp. mashin.  
Moscow-Leningrad, Mashgiz, 1957, pp 169-174

ABSTRACT: Bibliographic entry

1. Mining--USSR 2. Machines--Stresses 3. Chains--Applications

Card 1/1 .



SHTOKMAN, I.G., doktor tekhn.nauk; MEL'NIKOV, T.V., inzh.; POLUYANSKIY, S.A.,  
gornyy inzhener

Experimental research on increasing the speed of the chains of  
scraper conveyers. Vop. rud. transp. no.2:9-14 1957 ,  
(MIRA 14:4)

1. Dnepropetrovskiy gornyy institut (for Shtokman). 2. Khar'kovskiy  
zavod "Svet shakhtera" (for Mel'nikov). 3. Institut gornogo  
dela AN USSR (for Poluyanskiy).  
(Conveying machinery--Testing)

SHTOKMAN, I.G., doktor tekhn.nauk

Dynamic processes in flexible traction connectors during  
unsteady motion. Vop. rud. transp. no.2:61-71 1957.  
(MIRA 14:4)

1. Dnepropetrovskiy gornyy institut.  
(Conveying machinery)

SHTOKMAN, I.G., doktor tekhn.nauk

Static tension caused by changes in the length of the chain  
contour of a conveyer. Vop. rud. transp. no.2:79-84 1857.  
(MIRA 14:4)

1. Dnepropetrovskiy goranyy institut.  
(Chains)  
(Conveying machinery)

BILICHENKO, N. Ya., dotsent, kand.tekhn.nauk; KUZNETSOV, B.A., dotsent, kand.  
tekhn.nauk; SHTOKMAN, I.G., doktor tekhn.nauk

Resistance on the deflector drums of belt conveyers and sprocket  
scraper conveyers. Vop. rud. transp. no.2:123-127 1957.  
(MIRA 14:4)

1. Dnepropetrovskiy gornyy institut.  
(Conveying machinery--Testing)

SHTOKMAN, I.G.

Basic parameters of scraper conveyers. Ugol' 32 no.3:10-14 Mr '57.  
(MLRA 10:5)

1.Dnepropetrovskiy gornyy institut.  
(Coal mining machinery)  
(Conveying machinery)

SOV/122-58-8-7/29

AUTHORS: Shtokman, I.G., Doctor of Technical Sciences, and  
Iyakhovitskiy, S.I., Candidate of Technical Sciences

TITLE: Procedure for the Fatigue Analysis of Conveyor Chains  
(Metodika rascheta na ustalost' tyagovykh tsepey  
konveyerov)

PERIODICAL: Vestnik mashinostroyeniya, 1958, Nr 8, pp 23-26 (USSR)

ABSTRACT: Frequent fatigue failures of conveyor chains have  
prompted an analysis of the equivalent fatigue load  
and its comparison with the limiting fatigue strength.  
The fatigue load amplitude varies continuously. The  
equivalent fatigue load is defined by the following  
relation. The  $m$ -th power of the equivalent fatigue  
load, multiplied by the number of cycles (life) which  
defines the limiting fatigue load at constant amplitude  
in a symmetrical cycle is equal to the sum of all  
fatigue contribution terms. Each term refers to a  
number of cycles during which the symmetrically varying  
load has a constant amplitude and is equal to this  
number multiplied by the  $m$ -th power of the load amplitude.  
 $m$  is the exponent of the falling branch in the load/  
fatigue life plot. It is stated that for chains of

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SOV/122-58-8-7/29

Procedure for the Fatigue Analysis of Conveyor Chains

typical coal conveyors, operating under intense corrosion conditions, the limiting symmetrical fatigue load component is practically independent of the mean load. The example of a mine conveyor chain designated SKR-11, is quoted wherein the limiting fatigue load is independent of the mean chain tension and amounts to 700 kg. It was found on the basis of some test results that the symmetrical cycle load amplitude vanishes at the driving sprocket and grows linearly along the tension side to become a maximum at the driven sprocket. As the chain passes over the driven sprocket, its mean tension undergoes a sudden jump from that in the tension side to that of the slack side. In doing so, the fluctuating load component does not vary but retains its maximum amplitude and, during the passage along the slack length of the chain, again diminishes in accordance with a linear law until it vanishes when reaching the driving sprocket. The frequency of fluctuations is the sprocket tooth frequency. Hence, the total number of fluctuations is equal to the number of times each link passes over the driving sprocket times the number of links in the straight portions of the chain. It is stated that

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SOV/122-58-8-7/29

Procedure for the Fatigue Analysis of Conveyor Chains

the maximum amplitude of the fluctuating-load component can be determined from a resonance test of the installed chain, since many chains work under resonance conditions. The combination of these assumptions, with the help of elementary algebra, yields the equivalent fatigue load (Eq.(12)) which can be compared with the fatigue strength measured in rig tests. For example, the SKR-11 conveyor chain is installed in a conveyor of 100 m length between sprocket centres. The chain has a pitch of 8 cm and operates at a linear speed of 0.412 m/sec. The mean tension in the taut side is 200 kg and in the slack side, 1 000 kg. The specification calls for a service life of 2 100 operating hours. The maximum amplitude of the fluctuating-load component was found to be 800 kg. Fatigue tests of the chain have established a symmetrical cycle fatigue strength of 700 kg (constant amplitude) for a fatigue life of 3 million cycles. The value of the exponent  $m$  was 9. The application of the method proposed in the report yields an equivalent fatigue load of 840 kg. It follows that the effective load exceeds the limiting load and the chain cannot be expected to last the required service life.

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SOV/122-58 8-7/29

Procedure for the Fatigue Analysis of Conveyor Chains

Considering that a maximum fluctuating-load amplitude may vary from one installation to another, whilst the other properties of the chain remain the same, it is useful to derive for every chain a relation between the equivalent fatigue load and the maximum load amplitude. In a typical example, both magnitudes are nearly equal at 600 kg. However, at a fluctuating-load amplitude of 200 kg, the equivalent fatigue load is about 400 kg. There are 2 figures and 8 Soviet references.

1. Chains--Mechanical properties    2. Chains--Analysis    3. Chains  
---Test methods

Card 4/4

SHTOKMAN, I.G., doktor tekhn. nauk; LIPITSKIY, G.T., inzh.; UGOL'NIKOV, V.F.,  
inzh.

Rolling hinges on traction chains of multibucket excavators.

Izv. vys. ucheb. zav.; gor. zhur. no.12:79-86 '58.

(MIRA 12:8)

1.Dnepropetrovskiy gornyy institut.  
(Excavating machinery)

SHTOKMAN, I.G.

Fatigue strength of mine conveyer traction chains. Nauch. trudy  
MG I no. 20:54-60 '58. (MIRA 11:8)

(Conveying machinery)

(Link belting)

(Metals--Fatigue)

SHTOKMAN, I.G., doktor tekhn. nauk.; LYAKHOVITSKIY, S.I., kand. tekhn. nauk

Fatigue analysis of conveyor pull chains. Vest. mash. 38 no. 8:23-  
26 Ag '58. (MIRA 11:8)

(Chains--Testing)

POLYAKOV, Nikolay Sergeyevich, prof.; SHTOKMAN, Il'ya Grigor'yevich, prof.; KOMAROVA, Yevgeniya Kuz'minichna, dotsent; SPIVAKOVSKIY, A.O., prof., retsenzent; ANDREYEV, A.V., dotsent, retsenzent; VASIL'YEV, N.V., dotsent, retsenzent; YEVNEVICH, A.V., dotsent, retsenzent; LOPATIN, S.I., dotsent, retsenzent; SOLOD, G.I., dotsent, retsenzent; SHAKHMEYSTER, L.G., dotsent, retsenzent; SHORIN, V.G., dotsent, retsenzent; SAMOYLYUK, N.D., inzh., retsenzent; KOLOMIYTSYEV, A.D., otv.red.; SHKLYAR, S.Yu., tekhn.red.; KONDRAT'YEVA, M.A., tekhn.red.

[Problems and exercises on mine haulage] Sbornik zadach i uprazhnenii po rudnichnomu transportu. Izd.2., dop. i perer. Moskva, Ugletekhizdat, 1959. 256 p. (MIRA 13:4)

1. Chlen-korrespondent AN USSR (for Polyakov). 2. Chlen-korrespondent AN SSSR (for Spivakovskiy). 3. Kafedra rudnichnogo transporta Moskovskogo gornogo instituta (for Spivakovskiy, Andreyev, Vasil'yev, Yevnevich, Lopatin, Solod, Shakhmeyer, Shorin). (Mine haulage)

SHTOKMAN, Il'ya Grigor'yevich; YAKOVENKO, Yu.P., inzh., otv.red.;  
KOLOMIYTSSEV, A.D., red.izd-va; IL'INSKAYA, G.M., tekhn.red.

[Dynamics of mine conveyer traction chains] Dinamika  
tiagovykh tsapei rudnichnykh konveierov. Moskva, Ugletekh-  
izdat, 1959. 289 p. (MIRA 12:9)  
(Conveying machinery) (Mine haulage)

VASIL'YEV, Nikolay Vasil'yevich, dotsent, kand.tekhn.nauk; POLYAKOV, N.S., prof., retsenzent; SHTOKMAN, I.G., prof., doktor tekhn.nauk, retsenzent; BAKHURIN, K.I., kand.tekhn.nauk, retsenzent; KUZNETSOV, B.A., dotsent, kand.tekhn.nauk, retsenzent; BILICHENKO, N.Ya., dotsent, kand.tekhn.nauk, retsenzent; RENGEVICH, A.A., dotsent, kand.tekhn.nauk, retsenzent; KOZLOVSKIY, S.I., dotsent, kand.tekhn.nauk, retsenzent; YEVNEVICH, A.V., dotsent, kand.tekhn.nauk, otv.red.; GARBBER, T.N., red.izd-va; SHKLYAR, S.Ya., tekhn.red.

[Transportation and storage in ore dressing and briquetting plants]  
Transport i sklady na obogatitel'nykh i briketnykh fabrikakh.  
Moskva, Gos.nauchno-tekhn.izd-vo lit-ry po gornomu delu, 1959.  
341 p. (MIRA 13:2)

1. Zaveduyushchiy kafedroy rudnichnogo transporta Dnepropetrovskogo gornogo instituta, chlen-korrespondent AN USSR (for Polyakov).
  2. Kafedra rudnichnogo transporta Dnepropetrovskogo gornogo instituta (for Shtokman, Bakhurin, Kuznetzov, Bilichenko, Rengevich).
  3. Kafedra rudnichnogo transporta Moskovskogo gornogo instituta (for Yevnevich).
- (Ore dressing) (Ore handling) (Conveying machinery)

SHTOKMAN I. G.

ALEKSANDROV, B.F., inzh.; BALKOV, V.M., inzh.; BARANOVSKIY, F.I., inzh.;  
 BOGUTSKIY, N.V., inzh.; BUN'KO, V.A., kand.tekhn.nauk, dotsent;  
 VAVILOV, V.V., inzh.; VOLOTKOVSKIY, S.A., prof., doktor tekhn.nauk;  
 GRIGOR'YEV, L.Ya., inzh.; GRIDIN, A.D., inzh.; ZARMAN, L.N., inzh.;  
 KOVALEV, P.F., kand.tekhn.nauk; KUZNETSOV, B.A., kand.tekhn.nauk,  
 dotsent; KUSNITSYN, G.I., inzh.; LATYSHEV, A.F., inzh.; LEYBOV,  
 R.M., doktor tekhn.nauk, prof.; LEYTES, Z.M., inzh.; LISITSYN, A.A.,  
 inzh.; LOKHANIN, K.A., inzh.; LYUBIMOV, B.N., inzh.; MASHKEVICH,  
 K.S., inzh.; MALKHAS'YAN, R.V.; MILOSERDIN, M.M., inzh.; MITNIK,  
 V.B., kand.tekhn.nauk; MIKHEYEV, Yu.A., inzh.; PARAMONOV, V.I.,  
 inzh.; ROMANOVSKIY, Yu.G., inzh.; RUBINOVICH, Ye.Ye., inzh.;  
 SAMOILYUK, N.D., kand.tekhn.nauk; SMEKHOV, V.K., inzh.; SMOLDY-  
 REV, A.Ye., kand.tekhn.nauk; SNAGIN, V.T., inzh.; SNAGOVSKIY,  
 Ye.S., kand.tekhn.nauk; FEYGIN, L.M., inzh.; FRENKEL', B.B., inzh.;  
 FURMAN, A.A., inzh.; KHORIN, V.N., dotsent, kand.tekhn.nauk; CHET-  
 VEROV, B.M., inzh.; CHUGUNIKHIN, S.I., inzh.; SHEIKOVNIKOV, V.N.,  
 inzh.; SHIRYAYEV, B.M., inzh.; SHISHKIN, N.F., kand.tekhn.nauk;  
 SHPIL'BERG, I.L., inzh.; SHORIN, V.G., dotsent, kand.tekhn.nauk;  
 SHTOKMAN, I.G., doktor tekhn.nauk; SHURIS, N.A., inzh.; TERPIGOREV,  
 A.M., glavnyy red.; TOPCHIEV, A.V., otv.red.toma; LIVSHITS, I.I.,  
 zamestitel' otv.red.; ABRAMOV, V.I., red.; LADYGIN, A.M., red.;  
 MOROZOV, R.N., red.; OZERNOY, M.I., red.; SPIVAKOVSKIY, A.O.,  
 red.; PAYBISOVICH, I.L., red.; ARKHANGEL'SKIY, A.S., inzh., red.;  
 (Continued on next card)



ALEKSANDROV, B.F.---(continued) Card 2.

BELYAYEV, V.S., inzh., red.; BUKHANOVA, L.I., inzh., red.; VLASOV, V.M., inzh., red.; GLADILIN, L.V., prof., doktor tekhn.nauk, red.; GREBTSOV, N.V., inzh., red.; GRECHISHKIN, F.G., inzh., red.; GONCHAREVICH, I.F., kand.tekhn.nauk, red.; GUDALOV, V.P., kand.tekhn.nauk, red.; IGNATOV, N.N., inzh., red.; LOMAKIN, S.M., dotsent, kand.tekhn.nauk, red.; MARTYNOV, M.V., dotsent, kand.tekhn.nauk, red.; POVOLOTSKIY, I.A., inzh., red.; SVETLICHNYY, P.L., inzh., red.; SAL'TSEVICH, L.A., kand.tekhn.nauk, red.; SPERANTOV, A.V., kand.tekhn.nauk, red.; SHETLER, G.A., inzh., red.; ABARBARCHUK, F.I., red.izd-va; PROZOROVSKAYA, V.L., tekhn.red.; KONDRAT'YEVA, M.A., tekhn.red.

[Mining; an encyclopedic handbook] Gornoe delo; entsiklopedicheskiy spravochnik. Glav.red.A.M.Terpigorev. Chleny glav.redaktsii A.I. Baranov i dr. Moskva, Gos.nauchno-tekhn.izd-vo lit-ry po gornomu delu. Vol.7. [Mining machinery] Gornye mashiny. Redkol.toma A.V.Topchiev i dr. 1959. 638 p. (Mining machinery) (MIRA 13:1)

SHTOKMAN, I.G., doktor tekhn.nauk

Qualitative theory on the breaking of traction chains on mine  
conveyers from fatigue. Vop. rud. transp. no.3:9-22 1959.  
(MIRA 14:4)

1. Dnepropetrovskiy gornyy institut.  
(Chains—Testing)  
(Conveying machinery)

SHTOKMAN, I.G., doktor tekhnicheskikh nauk; EPPEL', L.I., gornyy inzhener

Testing traction chains on mine conveyers for fatigue. Vop.  
rud. transp. no.3:22-28 1959. (MIRA 14:4)

1. Dnepropetrovskiy gornyy institut.  
(Chains—Testing)  
(Conveying machinery)

SHTOKMAN, I.G., doktor tekhn.nauk

Allowing the use of a spring dynamometer to measure the dynamic  
load of traction chains. Vop. rud. transp. no.3:63-67 1959.  
(MIRA 14:4)

1. Dnepropetrovskiy gornyy institut.  
(Chains—Testing)  
(Conveying machinery)  
(Dynamometer)

SHITOKMAN, I.G., doktor tekhn.nauk

Theory of the performance of an inclined automatic belt conveyer  
with the motor cut off. Vop. rud. transp. no.3:82-86 1959.  
(MIRA 14:4)

1. Dnepropetrovskiy gornyy institut.  
(Conveying machinery)

SHTOKMAN, I.G., doktor tekhn.nauk

Research on the effect of external, diversified drag on eliminating vibration in chain conveyors. Vop.rud. transp. no.4:24-33 '60.  
(MIRA 14:3)

1. Dnepropetrovskiy gornyy institut im. Artema.  
(Conveying machinery--vibration)

SHTOKMAN, I.G., doktor, tekhn. nauk; SHEREMET, A.A., inzh.

Belt-chain conveyor theory. Vop.rud. transp. no.4:92-98 '60.  
(MIRA 14:3)

1. Dnepropetrovskiy gornyy institut im. Artema.  
(Conveying machinery)

SHTOKMAN, I.G., doktor tekhn.nauk

Problem of calculating the driving power of a winch in tail-rope  
haulage. Vop.rud. transp. no.4:325-330 '60. (MIRA 14:3)

1. Dnepropetrovskiy gornyy institut im. Artama.  
(Winches) (Mine haulage)



POLYAKOV, N.S.; SHTOKMAN, I.G., doktor tekhn.nauk

More about the selection of the motion speed of the scraper traction chain. Ugol' 36 no.3:57-58 Mr '61. (MIRA 14:5)

1. Dnepropetrovskiy gornyy institut. 2. Chlen-korrespondent AN USSR (for Polyakov).

(Conveying machinery)

POLYAKOV, Nikolay Sergeyevich, doktor tekhn. nauk, prof.; SHTOKMAN,  
Il'ya Grigor'yevich, doktor tekhn. nauk, prof.; KVITKO,  
A.K., otv. red.; KOVAL', I.V., red. izd-va; LOMILINA, L.I.,  
tekhn. red.; SABITOV, A., tekhn. red.

[Principles of theory and design of mine haulage apparatus]  
Osnovy teorii i raschety rudnichnykh transportnykh ustanovok.  
Moskva, Gosgortekhnizdat, 1962. 490 p. (MIRA 15:4)

1. Chlen-korrespondent Akademii nauk USSR (for Polyakov).  
(Mine haulage)

SHTOKMAN, I.G., prof.; BYSTROV, V.V., inzh.

Stability of traction chains of mine conveyors under the action  
of transverse loads. Izv. vys. uch. zav.; gor. zhur. 5 no.6:  
89-94 '62. (MIRA 15:9)

1. Donetskii ordena Trudovogo Krasnogo Znameni politekhnicheskii  
institut. Rekomendovana kafedroy gornozavodskogo transporta.  
(Chains) (Mechanical wear) (Conveying machinery)

SHTOKMAN, I.G., prof.; TIMOSHKIN, V.A., kand.tekhn.nauk; KRASILOVSKIY, L.S.,  
inzh.; IL'CHENKO, A.I., inzh.; BERLIN, M.Ya., inzh.; SMIRNOV, V.K.,  
inzh.; EPPEL', L.I., inzh.; FILIPPOV, A.M., inzh.

New two-member sectional TsDR traction chain for underground  
scraper conveyers.. Ugol' Ukr. 6 no.2:33-34 F '62. (MIRA 15:2)  
(Conveying machinery)

YEVNEVICH, Anton Vladislavovich; DAVYDOV, B.L., prof., retsenzent;  
SOLOV'YEV, A.A., prof., retsenzent; SHTOKMAN, I.G., prof.,  
retsenzent; VASIL'YEV, N.V., dots., ~~ov. red.~~, ROYAL', I.V.,  
red.izd-va; BOLDYREVA, Z.A., tekhn. red.; MAKSIMOVA, V.V.,  
tekhn. red.

[Machines formine haulage] Gornye transportnye mashiny.  
Izd.2. Moskva, Gosgortekhnizdat, 1963. 467 p. (MIRA 16:9)

1. Khar'kovskiy gornyy institut (for Davydov, Solov'yev)
2. Donetskii politekhnicheskii institut (for Shtokman).  
(Mine haulage)

LEYBOV, R.M., prof., doktor tekhn. nauk, red.; OGLOBLIN, D.N.,  
prof., doktor tekhn. nauk, red.; NAYDYSH, A.M., prof.,  
red.; KSEFOFONTOVA, A.I., prof., red.; MEDVEDEV, B.I.,  
dots., red.; TARANOV, P.Ya., dots., red.; LEYUOV, R.M.,  
prof., red.; SHTOKMAN, I.G., prof., red.; POLESIN, Ya.L.,  
otv. red.; YEROKHIN, G.M., tekhn. red.

[Safety measures in the coal industry] Tekhnika bezopas-  
nosti v ugol'noi promyshlennosti. Moskva, Gosgortekhzdat,  
1963. 317 p. (MIRA 16:12)

1. Donetskii politekhnicheskii institut (for Taranov,  
Shtokman).

(Coal mines and mining—Safety measures)

SHTOKMAN, I.G., prof.

Selection of a place to locate intermediate drives and equalizing devices for inclined apron conveyers. Izv.vys.ucheb.zav.;gcr.zhur.  
7 no.7:86-91 '64. (MIRA 17:10)

1. Donetskii politekhnicheskii institut. Rekomendovana kafedroy  
rudnichnogo transporta.

SHUBIN, V. V. (Vladimir Borisovich)

"Theoretical Bases for Calculating Stationary Geostrophic Currents on the Basis of Oceanographic Measurements," Problemy Arktiki, p. 2, 1941



"On the Problem of the Field of Turbulent Flow in the Sea  
in the Case of Change of the Intensity of Turbulent Diffusion and of  
The Velocity of the Flow,"

(Article Scientific Research Inst. VOP I Chief Administration of North  
Sea Route I), -1974-.

In: M. Nauk USSR, Ser. Geograf. i Geofiz., No. 1-6, 1974

"C. H. ... ..  
2-3 ... ..  
Inc. ... ..

1. Introduction

"The effect of temperature conditions in the  
development of the embryo,"

Dok.AN,

196, No. 3, 1971. Lit. Rev.olog; Anat. Sci., 1971-.

"The distribution of the spreading of Atlantic waters in the Polar Basin," Dok.AN,  
19, No. 1, 1945. L. V. Gorkovskiy; Izv. Sci., -1945-.

1. 1. 1. 1.

"Horizontal Circulation of Water in the Sea, as Caused by Non-Uniform Velocity  
Distribution in a Shallow Water Mass," Dok. Ak.  
Adm. No. 3, 1945. L. B. Gerasimov; Acad. Sci., 1945-.

V.B. STOKMAN

PA 50T83

ocean/Oceanology  
Heat - Conductivity

Jan 1946

"Vertical Distribution of Thermal Waves in the Sea and Indirect Method for Determining the Coefficient of Turbulent Heat Conductivity," V. B. Stokman, 44 pp

"Trudy Instituta Okeanologii" Vol I

Discusses errors of calculation of the turbulent heat conductivity coefficient  $K_z$  by the Fourier-Schmidt method and Fjeldstad's formula. Shows that computation of  $K_z$  by phase displacement amplitude relation should not be used as at present for small depth intervals, but that the most reliable value would be obtained by application of the formulas to the layer of greatest width. This is checked by application of method on Sargasso Sea data.

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PA 30102

STOKMAN, V.B.

USSR/Oceanology  
Currents, Ocean

Jan 1946

"On the Dissipation of Energy in Stationary Ocean  
Currents," V. B. Stokman, 16 pp

"Trudy Instituta Okeanol" Vol I

Evokes equation by integral method for computing  
dissipation of energy in currents produced by winds  
and pressure gradients in homogeneous limited sea  
of finite depth. Computations for the "Aranagrund"  
lightship agree well with the theory. Includes  
critical analysis of computation by K. Suda of  
dissipation in convectional current that disputes  
the reliability of the computations.

LC

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STICKMAN, V.B.

LC

50781

PA 50781

USSR/Oceanology  
Heat Exchange Systems

Jan 1946

"On the Relationship Between Coefficients of Horizontal and Vertical Turbulent Heat-Exchange in the Sea,"  
V. B. Stickman, 10 pp

"Trudy Instituta Okeanol" Vol I

Relations between coefficients of horizontal ( $K_x$ ) and the vertical ( $K_z$ ) turbulent heat exchange in the sea shown to be determinable approximately from the expression  $\frac{K_x}{K_z} = \left( \frac{2\beta}{\beta} \frac{\partial \theta}{\partial y} \right)^2$ .

Thus  $K_x$  is on the average 10<sup>6</sup> times greater than  $K_z$ . Evidence produced that  $K_z$ , contrary to general opinion

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USSR/Oceanology (Contd)

Jan 1946

must possess molecular rather than turbulent significance, whereas  $K_x$  may have turbulent significance. Thus, relation between the two will be particularly high.



PA 50T80

STOKMAN, V.B.

USSR/Oceanology

Jan 1946

Heat - Conductivity

"On the Thermal Regime of the Murshio," V. B. Stokman, 25 pp

"Trudy Instituta Okeanol" Vol I

Analyzes temperature observations on the section off Sion Mtsaki in attempt to characterize the thermal regime of the Murshio. Computes vertical changes of the coefficient of turbulent heat-conductivity by Fjeldstad's formula. Determines changes with time showing large yearly variation, at the 100-m depth. Calculates approximate value of advective heat-flow in the 0- to 200-m layer,

IC

50T80

USSR/Oceanology (Contd)

Jan 1946

and the mean value of the horizontal temperature gradient, and qualitatively analyzes local changes of temperature at different depths of the section.

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50T80

SHTUKMAN, I. I.

"Theory of Equatorial Counter-Currents in Oceans," Iz Akademii Nauk SSSR, Ser Geograf i Geofiz  
Vol X, No 6, 1946 (517-527).  
(Meteorologiya i Gidrologiya, No 6 Nov/Dec 1947)

SO: U-3218, 3 Apr 1953

"The Profile B Determination of Certain Possibilities of the Meridian Profile  
of the Surface of the Pacific Ocean,"  
13, No. 4, 1961. Inst. of Oceanol., Acad. Sci. -1961-.

Dok.AN,

SHUTKAL, V. L.

"Observed Peculiarities of Coastal Circulation in the Sea and Their Connection with the Transverse Irregularity of the Wind," Doklady Akademii Nauk SSSR, Vol 54, No 3, 1946 (227-230).

(Meteorologiya i Gidrologiya, No 6 Nov/Dec 1947)

SO: U-3218, 3 Apr 1953

SHUTKIN, V. D.

"Equations for the Field of Complete Currents which are Excited by Winds in a Heterogeneous Sea," Doklady Akademii Nauk SSSR, Vol 54, 1946 (407-410).  
(Meteorologiya i Gidrologiya, No 6 Nov/Dec 1947)

SO: U-3218, 3 Apr 1953

"The Field of Flow in a Jet as Described in Terms of the Equation for a  
Potential Flow Under Vortex Stresses,"  
Dok.AN,  
5, No. 7, 1966. Inst. General., Acad. Sci. 61046-.

Enrichment, A. A.

"Circulation Excited by Winds at the Deepest Parts of the Caspian Sea," Meteorol.  
i. Meteorol. No 2, pp 42-52, 1947

SHUCKMAN, V. V.

"Dissipation of Energy of Stationary Currents Which are Excited by a Non-equilibrial Wind in a Closed Homogeneous Sea," pp 53-64.  
(Meteorologiya i Gidrologiya, No 6 Nov/Dec 1947)

SO; U-3218, 3 Apr 1953



SHUTKOVAN. V. F.

"Are Counter-Currents Possible in a Shoreless Sea Which are Due to Local Non-uniformity of Winds," No 5, pp 83-91.  
(Meteorologiya i Gidrologiya, No 6 Nov/Dec 1947)

SO: U-3218, 3 Apr 1953

SHTOKMAN, V.B.

"Effect of Bottom Topography on the Diredtion of Currents in the Sea. Priroda,  
11, (1947), 10-23.

SO: Translation-2524467, 30 Apr 1954.

SHTOKMAN, V. B.

Shtokman, V. B.

Theoretical Model For the Circulation on The Surface of The Ocean  
in Regions of The Equatorial Counter Current

Doklady Akademiyi Nauk, SSSR  
Vol. 57, 1947, pp. 669

From: B. N. L. Guide to R.-Scientific Per. Lit. No. 2, Vol. 1, May 1948, p. 22

USSR/Hydrology

Oceanology  
Currents, Ocean

Oct 1947

"New Indicators of the Significance of the Irregularity of the Wind as One of the Reasons for Circulation in the Sea," V. B. Shtokman, Inst Oceanology Acad Sci USSR, 4 pp

"Dokl Akad Nauk SSSR" Vol LVIII, No 1

Irregularities in the wind are proposed as an explanation for the observed discontinuous character of occurrence of equatorial counter currents on the surface of the ocean, when counter currents exist

52136

USSR/Hydrology (Contd)

Oct 1947

in the form of separate, comparatively short lengths, and are not spread as a continuous strip of large zonal expanse. Submitted by Academician P. P. Shirshov, 28 Apr 1947.

52136

SHTOKMAN, V. B.

SATUNIAN, I. S.

"Equatorial Counter Currents in Oceans (Ekvatorial'nyye protivotechniya v okeanakh), Gidrometeoizdat, Leningrad, 1948, 156 pages.

SHTOKMAN, V. B.

PA 43/43T92

USSR/Oceanography  
Meteorology

Feb 1948

"Relation between the Field of Wind, Field of Overall Currents and the Intermediate Field of Masses in a Heterogeneous Ocean," V. B. Shtokman, Inst Oceanology, Acad Sci USSR, 4 pp

"Dok Akad Nauk SSSR, Nova Ser" Vol LIX, No 4  
pp 675-678

Shows that original theory of horizontal circulation in heterogeneous ocean is inadequate, and establishes new set of equations for various conditions. Submitted by Academician P. P. Shirshov, 9 Dec 1947.

43T92

Translation 2524467, 30 Apr 54

SHOKMAN, V.B.

Shokman, V. B. The influence of the profile of the bottom  
on the direction of the mean current excited by the wind  
or the field of a mass in an inhomogeneous ocean.  
Doklady Akad. Nauk SSSR (N.S.) 59, 889-892 (1948).  
(Russian)

Source: Mathematical Reviews.

Vol 10, No. 9

7.8-180

551.556:551.461(264)

Shtokman, V. B. Znachenie vetra i rel'efa dna v obrazovanii nabludаемых osoben-  
nostei dinamicheskoi topografii iuzhnoi chasti Atlanticheskogo okeana. [Significance of  
wind and bottom relief in the formation of the dynamic characteristics of the southern part  
of Atlantic Ocean.] *Akademiia Nauk SSSR, Doklady*, 60(6):985-988, May 1948. 3 figs.,  
4 refs., 5 eqs. DLC—Features clearly expressed by the undulating contours of dynamic sur-  
faces crossing the ocean from W to E between latitudes 25-40°S and by closed ring-shaped  
regions of dynamic heights, resembling a series of vortices inside the wavelike belt, are shown  
on a topographic chart of the South Atlantic surface according to A. DEFANT's numerous  
observations (on the "Meteor"). As indicated by DEFANT, this chart of dynamic topography  
of the ocean's surface is astonishingly similar to, and is linked with, the underwater relief of  
the region which is characterized by alternating elevations and depressions of the ocean's  
bottom as shown by a chart representing the bathymetry of the region. The observed regu-  
larities are explained in the light of the author's earlier theory of stationary currents stirred up  
by winds in a heterogeneous sea. Subject Headings: 1. Wind effects 2. Sea surface contours  
3. South Atlantic.—A.M.P.



1. SHCHOMIN, V.B.

2. USSR (600)

4. Ocean Currents

7. Studying the effect of wind and bottom profile on resultant circulation and distribution of masses in a non-homogeneous ocean or a sea.  
Trudy Inst. okean. 3. 1949

9. Monthly List of Russian Accessions, Library of Congress, February 1953. Unclassified.

1941-1942, p. 1.

Ocean Currents

on the theory of ocean currents, Met. i gidrol, No. 5, 1949.

Monthly List of Russian Accessions, Library of Congress, October 1951. UNCLASSIFIED.

SHTOKMAN, V. B., Prof

PA 152T83

USSR/Oceanography - Sea Bottoms  
Sea Currents

Nov 49

"Influence of the Relief of the Sea Bottom on  
the Direction of Sea Current," Prof V. B.  
Shtokman, 14 pp

"Priroda" No 11

Shtokman has formulated a new theory on the influence of the sea bottom on direction of sea currents. Points out cases where Ekman and Sverdrup's theories do not hold. Basis of the theory advanced is the following rule: When an elevation of the bottom is intersected by a

152T83

USSR/Oceanography - Sea Bottoms  
(Contd)

Nov 49

flow, the flow line twists around the top in a direction corresponding to a whirlwind in a wind field; when a depression of the bottom is intersected by a flow, the flow line twists over its central part in the opposite direction.

152T83

SHTOKMAN, V. B.

USSR/Meteorology - Winds

1 Mar 50

"Determining the Flow Velocities and Density Distribution in the Cross Section of an Infinite Channel, in Dependence Upon the Wind Effect and Lateral Friction in a Coriolis-Force Field," V. B. Shtokman, Inst of Oceanol, Acad Sci USSR

"Dok Ak Nauk SSSR" Vol LXXI, No 1, pp 41-44

Shtokman sets up and solves equations for x and y components,  $S_x$  and  $S_y$ , of total flow  $\vec{S}$  in barocline sea, also quantity Q, involving density of flow. Gives example of iso-lines drawn on cross section 300 m deep and 100 km wide, using these equations. Submitted 14 Nov 49 by Acad P. P. Shirshov.

169735

*Translation 2524467- 30 Apr 54*

SHTOKMAN, V. B.

✓ 5.3-222

Shtokman, V. B., *Opredefenie statsionarnykh techenii i polia massa, obuslovlennykh vetrom i baroklinicheskimi morskimi*. [Stationary currents and field of masses due to wind in a baroclinic sea.] *Akademiia Nauk, SSSR, Institut Okeanologii, Trudy*, v. 6:3-48, 1951. 19 figs., 7 tables, 19 refs., eqs. DLC—Comprehensive theoretical study for which the author applied results of previous investigations throughout the world and also his own ideas. The characteristics of lateral currents due to wind are presented in the first part. In Pt. 2 the author analyzes effect of lateral friction in the field of Coriolis force and distribution of density and velocity of flow due to wind for some weather situations. Subject Heading: 1. Wind driven currents.—N.T.Z.

551.556:551.465

SHTOKMAN, V. V.

USSR/Geophysics - Sea Currents Sep/Oct 52

"Application of Method of Full Currents to Computation of the Circulation Produced by an Irregular Wind in a Sea of Elliptical Shape," V. V. Shtokman, Inst of Oceanol, Acad Sci USSR

"Iz Ak Nauk SSSR, Ser Fiz" No 5, pp 57-68

In his previous works "Dok Ak Nauk SSSR" 54, 5 1946; 59.4, 1948; "Trudy Inst Okeanol, Ak Nauk SSSR" 3, 1949) the author attempted to show that computation of full current in the sea has

226r59

advantages over computations of velocities of current on sep levels. Results show that full currents in the middle of transversal sections of closed sea of elongated shape may, without considerable error, be substituted by an infinite rectilinear channel. Received 14 Dec 52.

226r59

SHTOKMAN, V. B.

237T50

of wind. Computes densities of water in cross section of elongated sea. Proposes general model of density distribution. Indicates method to find coefficient of lateral turbulent friction from density and current-velocity calcs.

237T50

PA 237T50

"Iz Ak Nauk SSSR, Ser Geofiz" No 6, p 57-72

Expounds method of computing total currents in middle cross section of closed sea extended in direction of wind. It is possible to replace elongated sea by rectilinear channel bounded at infinity, for any cross sectional nonuniformity

USSR/Geophysics - Sea Currents

Nov/Dec 52

"Determining Steady-State Currents and Density Distribution in the Middle Cross Section of a Closed Sea Elongated in Form," V. B. Shtokman, Inst of Oceanol Acad Sci USSR

SHTOKMAN, V. B.

USSR/Geography - Sea Currents

Aug 52

"Magnitude of Deviation of Sea Currents Which Results From Relief of the Bottom," V. B. Shtokman, Moscow Inst of Oceanol

"Meteorol i Gidrol" No 8, pp 13-19

Previous investigations by author (cf. "Priroda" 11, 1949; Meteorol i Gidrol" 6, 1949; Trudy Inst Okeanol, Ak Nauk SSSR" 3, 1949) differ from the formerly accepted theory of Ekman, with whom author polemizes. He develops a new theory of current deviation due to the relief of the sea bottom. But he

229T75

considers this theory incomplete, until the solution of the math problem of lower boundary of flow excited by wind.

229T75



SHTOKMAN, V. B.

PA 241T36

USSR/Geophysics - Sea Currents

Jan/Feb 53

"Some Problems of the Dynamics of Sea Currents," V. B. Shtokman, Inst of Oceanology, Acad Sci USSR

"Iz Ak Nauk SSSR, Ser Geofiz" No 1, pp 69-77

Investigates the influence of latitudinal variation of Coriolis parameter in the distribution of complete flows and densities in mean cross-section of a river elongated along the wind form. Indicates that influence of latitudinal variation of Coriolis parameter is minor for small transverse dimensions of internal rivers. Qualitatively evaluates thickness of the baroclinical layer in the limits of which the circulation in the ocean caused by wind is realized.

241T36

SHTOKMAN, V.B., doktor fiziko-matematicheskikh nauk, professor

Effect of lateral irregularity of drifting ice on horizontal  
circulation in the ocean. *Metero, i gidrol.* no.2:20-24 P '53.  
(MIRA 8:9)

1. Institut okeanologii Akademii nauk SSSR.  
(Icebergs)

SHIMAN, V. I.

Jul/Aug 53

USSR/Geophysics - Ocean Currents

"Model of Complete Currents Excited by Winds on a Sea," V. I. Shiman, Inst of  
Oceanology, Acad of Sci USSR

Iz Ak Nauk SSSR, Ser Geofiz, No 4, pp 324-334

Considers the analogy between (a) traverse flexures produced along the border of a flat  
plate and (b) the distribution of complete flows excited by winds on the sea. Discusses  
the modeling principles based on this analogy. Shows the possibility of taking into  
account the latitudinal variation in the Coriolis force during modeling.

265 182

"Influence of the Relief of Bottom and Transverse Inhomogeneity of Wind Upon Motion of Currents in a Small Sea or Reservoir," Meteorol. i Gidrologiya, No 3, 1955, p. 11-12.

The author investigates the problem of countercurrents due to the transverse inhomogeneity of the wind and to the unevenness of the cross section of the bottom in small reservoirs drawn out in the direction of the wind. Just as in an earlier work of the author (Izv. Akad. Nauk SSSR, seriya geogr. i geofiz., No 1, 1951) the author finds the solution to the equation  $\mu_{zz} + \rho g \sin \alpha = 0$  (sic), where  $\mu$  is the constant coefficient of internal turbulent friction,  $\rho$  is the density of water, and  $\alpha$  is the angle of longitudinal inclination of the water in the direction of the wind, which angle is averaged in the transverse direction. The difference from the mentioned work consists in the boundary conditions which are given at the bottom (cross section of the bottom is represented by an arbitrary curve) and at the surface of the water. He presents analytical and graphical (for a concrete example) investigations into the integral of the equation. He shows that the countercurrents in the cross section of a small sea of variable depth depend both upon the transverse inhomogeneity of the tangent friction of wind and upon the depth in one or another position of the cross section; here the countercurrent can with greater probability be expected in channel-shaped depression in the bottom of a small sea. He emphasizes that an essential difference exists between the distribution of countercurrents in a real sea with variable bottom relief and that in an ideal sea of constant depth. He finds an expression for the tangent stress at an arbitrary point of the sea bottom; he uses it for finding points of ground erosion. (RZhGeol, No 6, 1955) SC: Sum.No. 713, 9 Nov 55

STOKMAN, V. B.

Stokman, V. B. On the computation of the "lateral" friction in the dynamics of ocean flows (criticism of Hidaka's results). Dokl. Akad. Nauk SSSR (N.S.) 88, 795-798 (1953). (Russian)

L'auteur montre en se basant sur ses recherches antérieures que l'étude de la circulation horizontale provoquée par le vent dans un océan non homogène nécessite la résolution d'une équation aux dérivées partielles de la forme

$$(1) \quad \frac{\partial^4 \psi}{\partial x^4} + 2 \frac{\partial^4 \psi}{\partial x^2 \partial y^2} + \frac{\partial^4 \psi}{\partial y^4} = - \frac{\text{rot } \tau(x, y)}{A_1}$$

avec les conditions initiales  $\psi=0$ ,  $\partial\psi/\partial n=0$  le long du contour  $L$  où  $n$  est la normale au contour. M. Hidaka résout cette équation en négligeant le terme  $2\partial^4\psi/\partial x^2\partial y^2$  et en ajoutant un terme provenant de la fonction de Coriolis. L'auteur montre en introduisant les coordonnées polaires que, tandis que la solution de (1) peut admettre une symétrie sphérique, les solutions obtenues par M. Hidaka n'admettent pas des solutions parcellles.

M. Kiveliovich (Paris). *KE* *RAV*

SHTOKMAN, V. B.

USSR/Geography Climatic fluctuations

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Authors : Shtokman, V. B.

Title : Circular currents around islands and reverse flows at the shores of straits

Periodical : Izv. AN SSSR. Ser. geog. 4, 29 - 37, July - August 1954

Abstract : The reasons for circular currents around islands and reverse currents at the shores of straits, are explained scientifically. The effects of Coriolis forces and wind on the movement of sea waters, are discussed. Five references: 4 USSR and 1 English (1947 - 1953). Drawings.

Institution : Acad. of Sc. USSR, Institute of Oceanology

Submitted : ....

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Development of absolute currents in the ocean by wind action.  
Trudy Inst. okean. no.9:5-22 '54. (MLRA 8:6)  
(Ocean currents)

Sato Kman. V.B.

... of the ... counter currents developed earlier by the author ... the distribution of the zonal constituent ... the determining the meridional boundaries ... the results obtained with ... the current in the Pacific Ocean ... the season and its meridional boundaries are most clearly evident. The equations and ... for calculating the boundaries are presented and the results are given ... It was found that theoretical calculations and actual observations ... correspondence quantitatively the agreement is much greater. Sato, K. ... Wind driven currents 2. Pacific Ocean. - I.L.D.



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FEL'ZENBAUM, A.I.; FOMIN, L.M.; SHTOKMAN, V.B.

Calculating deep-sea currents by means of using the surface currents  
and the gradient of atmospheric pressure. Trudy Inst. okean. 25:153-  
170 '57. (MIRA 11:2)

(Ocean currents)

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Wind influence on currents in the Bering Strait, causes for their high velocities and their prevailing northern direction. Trudy Inst. okean. 25:171-197 '57. (MIRA 11:2)  
(Bering Strait--Ocean currents)

FEL'ZENBAUM, Aleksandr Isayevich; SHTOKMAN, V.B., prof., otv.red.;  
GUROV, Kh.P., red.izd-va; TIKHOMIROVA, S.G., tekhn.red.

[Theoretical foundation and methods of calculating steady  
currents in the sea] Teoreticheskie osnovy i metody rascheta  
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SSSR, 1960. 126 p. (MIRA 13:11)  
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Follow-up to O.I. Mamaev's article "T, S analysis of moving water  
masses in the ocean which are limited in respect to the vertical.  
Okeanologiya 2 no.5:949 '62. (MIRA 15:11)  
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